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# Economic Currents: The State of the State Economy

Alan Clayton-Matthews  
*University of Massachusetts Boston*

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# economic CURRENTS



Illustration by Naomi Shea

ALAN CLAYTON-MATTHEWS

*Massachusetts is still in a recession. Forecasts made earlier in the year — that the state economy would be experiencing modest growth by now — have been revised. Instead, it continues to contract. Joining long-suffering sectors such as technology and manufacturing, finance and state government are now making employment cuts. Even consumers, whose continued spending has been a last stronghold of the state economy, are showing signs of distress. Will the Commonwealth follow the nation on the road to recovery, or is our trajectory taking us elsewhere?*

The Commonwealth's economy, instead of mildly expanding, as was expected early in the year, continues to contract. According to the Massachusetts Current Economic Index, real gross state product declined in the third quarter at a 0.5 percent annual rate. The leading index for September is positive, at 0.5 percent, suggesting that Massachusetts is on the verge of a recovery that could begin slowly by the spring. The three-month average of the leading index, however, is -0.2, indicating that the recession is likely to continue into the beginning of next year.

Most of the data and news not included in the index tend to support a continuation of the recession, though it is possible that the worst is occurring now and that business conditions will soon begin to improve. The New England Economic Project forecast for Massachusetts takes this



## Economic Indices for Massachusetts

**T**he Massachusetts Current Economic Index for September was 127.5, down 0.3 percent from August (at annual rates), and down 0.5 percent from September of last year. The current index is normalized to 100 in July 1987 and is calibrated to grow at the same rate as the Massachusetts real gross state product over the 1978–1997 period.

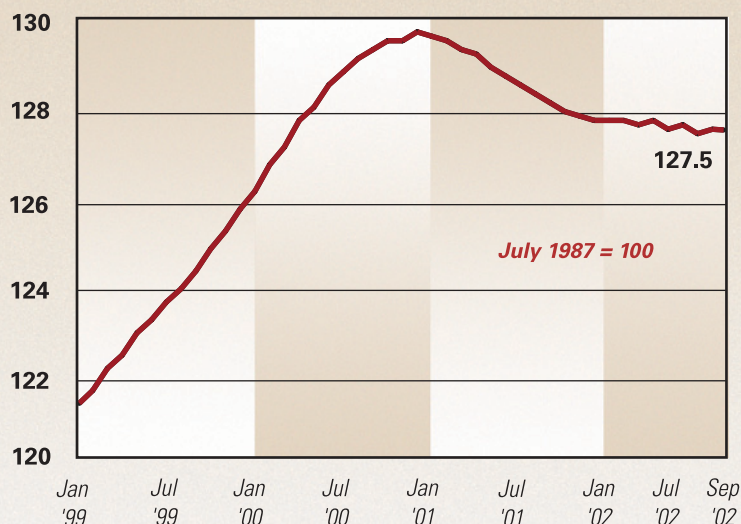
The Massachusetts Leading Economic Index for September was 0.5 percent, and the three-month average for July through September was -0.2 percent (negative 0.2 percent). The leading index is a forecast of the growth in the current index over the next six months, expressed at an annual rate. Thus, it indicates that the economy will grow at an annualized rate of 0.5 percent through March 2003. Because of monthly fluctuations in the data on which the index is based, the three-month average—a 0.2 percent decline—may be a more reliable indicator of near-term activity.

The economic outlook for Massachusetts deteriorated over the summer. According to the current index, the state economy contracted at an annualized rate of 0.5 percent in the third quarter, the seventh consecutive quarterly decline. In contrast, the U.S. economy grew at an annualized rate of 1.3 percent in the second quarter and is expected to exhibit strong growth in the third quarter. The state's relative weakness is due to its substantially higher concentration of information technology producers, which are suffering from a drought in capital spending by businesses.

The recession is likely to continue into the beginning of next year, despite the positive value of the leading index. Quarterly reports from technology companies are almost universally downbeat. Many firms with a substantial presence in the state, including EMC, Lucent, Hewlett-Packard, and Sun Microsystems, are laying off workers. The finance industry is also shedding workers, as a result of the bear market. This is not yet captured in the indices' underlying indicators, nor is October's consumer confidence for Massachusetts, which plummeted, according to the MassInsight survey. The Massachusetts economy should continue to contract, even as the U.S. economy expands.

SUBMITTED OCTOBER 21, 2002

### Massachusetts Current Economic Index



### Massachusetts Leading Economic Index



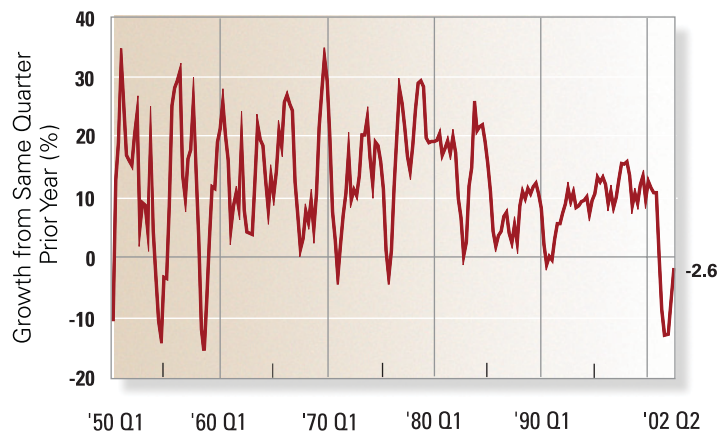
Sources: The Conference Board; University of Massachusetts; Federal Reserve Bank of Boston

rather optimistic view: output will begin to grow in the first quarter of 2003, employment will follow in the second quarter, and the unemployment rate will begin to fall by the end of 2003. The fact that this view now seems optimistic reflects how disappointing the last few months have been.

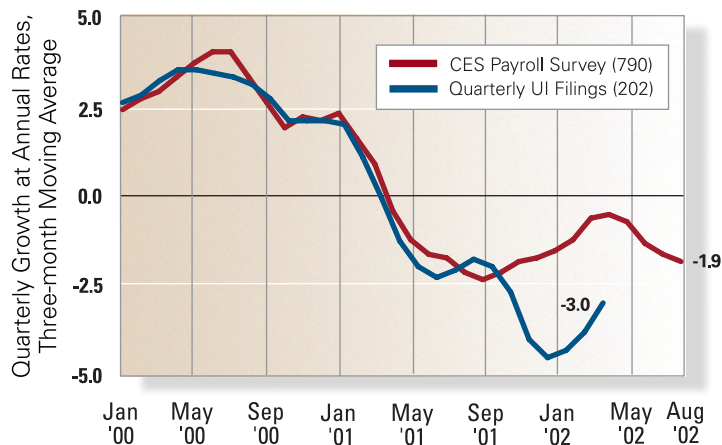
**The Recession Continues in Massachusetts**

This recession—which began in December 2000, as dated by the peak of the Massachusetts Current Economic Index—is nearing the two-year mark. The cause of this downturn was the bursting of the technology bubble in stocks, production, and employment in the spring of 2000. The collapse of business spending that followed, particularly on information technology, hurt Massachusetts disproportionately because of the state’s concentration in the production of computers, electronics, and communications equipment. The year-over-year percent declines in investment spending for information processing equipment and software, as measured in national income and product accounts, was deeper than at any time since the 1950s. In absolute terms, or as a proportion of the economy, they are unprecedented.

**Growth in Information Processing Equipment and Software, U.S. Investment**



## Massachusetts Job Growth, Payroll Survey vs. Unemployment Insurance Filings by All Employers



Source: Massachusetts Division of Employment and Training

This characterization may change, however, when employment data are revised next February. New data will be derived from the more reliable “202” employment series, which is based on a complete job count. The two employment series tracked each other well until last October. Between October 2001 and March of this year, however, the last month of data available in the 202 series, the rate of job loss in the payroll survey slowed, while the rate of job loss in the 202 series accelerated. From the employment peak through March, the 202 series indicates a loss of 42,300 more jobs than shown by the payroll survey. If this differential were maintained through September, then the actual job loss from the peak would be 134,400, or 4.0 percent. During the first 20 months of the prior recession, 178,100, or 5.7 percent of all jobs were lost.

### It Could Be Worse

It is commonly accepted that the recession would be much worse, both nationally and locally, had it not been for consumer spending. Consumer confidence has been supported by low interest rates, a strong real estate market, and a high level of mortgage refinancing with substantial “cash outs.”

In Massachusetts, there was another factor that almost certainly supported spending, and therefore the state’s economy. This was the enormous excess level of capital gains, bonuses, and realized stock options that Massachusetts residents and workers accumulated during the last few years of the boom and bubble. These amounted to perhaps \$40 billion or more in additional income.<sup>1</sup> Though there is no way to account directly for how these monies were used, it is very likely that they have supported household spending in a manner similar to the way the Commonwealth’s rainy day tax fund has supported state

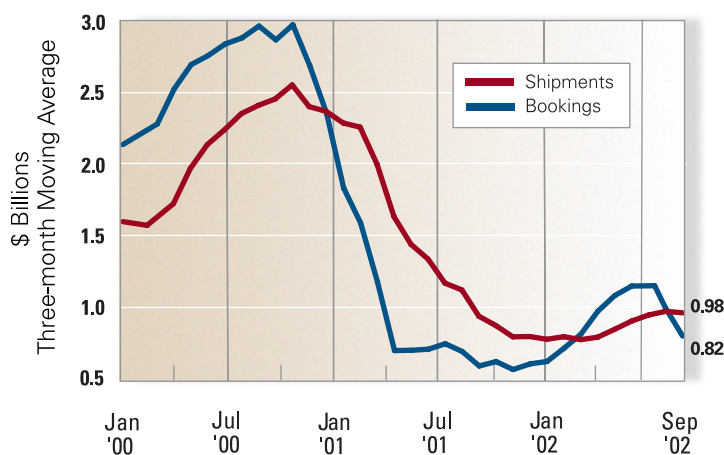
spending. This is a large sum of money, and though it is concentrated among a relatively small proportion of households, it may result in enough additional local spending to keep the economy from slipping deeper into recession. It may help tide us over until business spending picks up again.

### Signs of Life...

Not all of the economic indicators are negative. After all, the Massachusetts Leading Economic Index for September is projecting slow growth in the state’s economy through March. This follows three months of negative projections. The improvement reflects a good employment report for September, in which the unemployment rate held steady, and payroll employment eked out a modest gain of 900 jobs. There was also a rebound in stock prices in the two weeks prior to the index’s calculation.

Some production indicators are also positive. U.S. investment spending for information and processing equipment and software was up at an annualized rate of 8.9 percent in the second quarter.<sup>2</sup> Shipments of North American semiconductor equipment were up sharply in the third quarter, at an annualized rate of 63 percent.<sup>3</sup> Both these national indicators are significant for Massachusetts because of the state’s concentration of production in these investment goods. The increase in semiconductor equipment is in response to a surge in new orders for machinery and testing equipment to make a new generation of computer chips.

## Worldwide Semiconductor Equipment Shipments and Bookings

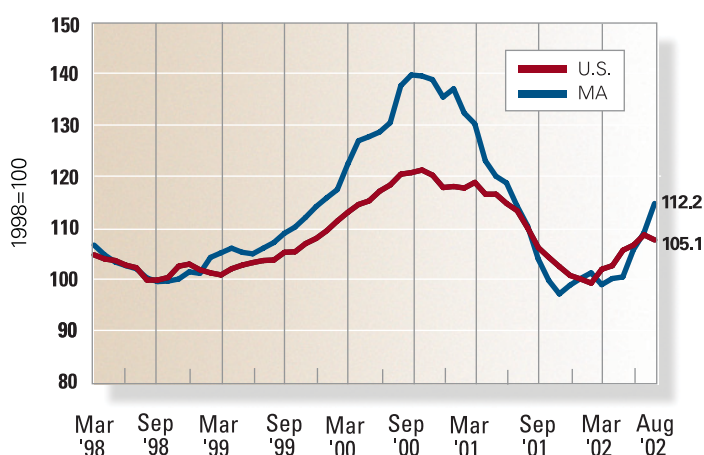


Source: Semiconductor Equipment and Materials International

One of the only production indicators regularly available at the state level is merchandise exports,<sup>4</sup> and these are up sharply since October of last year. In the three-month period ending in August, they grew at an annualized rate of 73 percent over the prior three months.



## Merchandise Exports Seasonally Adjusted Three-Month Average



Source: Massachusetts Institute of Social and Economic Research

### ...but There Are Storm Clouds on the Horizon

The overwhelming weight of recent news is decidedly negative. Technology firms reporting third-quarter financial results did not have good news. Among these were EMC, Lucent, Hewlett-Packard (which acquired Compaq), Sun Microsystems, and Intel, all major technology-related employers in the state. All cited disappointments in revenues, lowered expectations of sales for the fourth quarter, and—with the exception of Intel—announced layoffs or are in the process of laying off workers. The statements of these companies and other technology firms suggest that conditions deteriorated significantly over the summer.

Furthermore, relative to six months ago, there is a greater degree of uncertainty over when demand for their products—most of their sales rely on capital spending by business—will resume. Last year at this time, there was a

rough consensus among industry analysts that capital spending and technology sales would pick up in the spring of 2002. When spring came, the turnaround was moved back to this fall or the fourth quarter. Now, very few industry executives are confident enough to hazard a guess they would release to the public. Instead, the strategy seems to be to hunker down and rely on cash reserves to tide their firms over until demand resumes.

In the absence of revenue growth, firms in the technology sector are attempting to get to profitability or to minimize the “burn rate” of cash reserves by cutting costs. This is usually accomplished by means of reduced capital expenditures and layoffs. It also appears that many firms, in the expectation that business would have begun growing robustly by now, were hoarding workers that they now cannot afford to keep. Both EMC and Sun Microsystems specifically mentioned this strategy in their recent layoff announcements.

National production data for information-technology sectors corroborates these quarterly reports. Industrial production of information processing equipment in the third quarter is down from the prior quarter at a 2.0 percent annualized rate.<sup>5</sup> The value of shipments for computers and electronic products in the three-month period ending in August is down at a 1.7 percent annualized rate, while orders are down at a 7.0 percent annualized rate. Furthermore, the orders-to-shipments ratio is below one, suggesting that shipments are unlikely to improve in the coming months.<sup>6</sup>

Though worldwide semiconductor billings were up at a strong annualized rate of 23.2 percent in the three-month period ending in August, sales from companies in the Americas (essentially, the United States) were down at

## News: Technology and Finance-Sector Businesses with a Strong Presence in Massachusetts

▶ <b>EMC</b>	10/18/2002	Sales up from prior year, but below prior quarter. Losing market share.
▶ <b>Sun Microsystems</b>	10/18/2002	Announced layoffs of 4,400, 10% of its workforce. Sales down 4% from prior year.
▶ <b>Akamai Technologies</b>	10/17/2002	Cutting 200 jobs, 29% of its workforce. Sales down 17% from prior year.
▶ <b>Intel</b>	10/16/2002	Lowered expectations of fourth-quarter sales growth to between flat and 6% above third quarter. The fourth quarter is normally strong.
▶ <b>Lucent Technologies</b>	10/12/2002	Cutting 10,000 additional jobs as sales fall below existing “anemic” expectations. Credit rating fell deeper into junk bond status.
▶ <b>EMC</b>	10/4/2002	Cutting 1,350 jobs, 7% of its workforce, citing “brutal” lack of demand for technology products.
▶ <b>Fidelity Investments</b>	10/1/2002	Cutting 1,695 jobs, 5.4% of its workforce. More than 870 of the jobs are in Massachusetts.
▶ <b>Hewlett-Packard</b>	9/26/2002	Cutting an additional 1,800 jobs due to persistent weakness in technology spending by consumer and business sectors.
▶ <b>Radio Shack</b>	8/22/2002	Reduced its third-quarter sales estimates to a negative growth of 1% to 2% from the prior year, as business dropped abruptly in August.

Sources: Wall Street Journal, Boston Globe

*There is a distinct possibility that both businesses and households, in assuming the recession would be short, have acted in a manner to buffer the effects of the recession by retaining workers and maintaining an accustomed standard of living.*


a 6.0 percent annualized rate.<sup>7</sup> Even the recent bright news for semiconductor equipment has a dark side. Though the quarterly rate of shipments was up sharply, September was down from August. Furthermore, new orders (bookings) have declined sharply in the third quarter and in September were running at only 80 percent of shipments, indicating that a further decline in the coming months is likely.

The bad news is not limited to technology production; the finance industry is also under pressure to cut costs. Falling stock markets and outflows of money from high-fee equity funds to lower-fee bond and money market funds have hit the money managers. Fidelity, Putnam, State Street, and State Street Research and Management have all laid off workers. Fidelity recently announced the layoffs of 872 Massachusetts workers by the end of the year.

The state government will almost certainly have to continue shedding workers, as the Commonwealth is in a deep revenue hole that will take years to surmount. From the mid 1990s through 2001, the trend rate of growth of tax revenues was approximately 6.0 percent per year, while spending grew at about 5.8 percent per year. At the end of the technology bubble, revenues grew faster than this trend rate, despite reductions in tax rates, allowing the state to accumulate reserves in a “rainy day” fund. As recently as March 2001, revenue collections were running at an annual rate of \$600 million above trend. Between then and July 2002, the monthly average flow of revenue collections fell more than 20 percent. For the first three months of FY 2003, collections are running at an annual rate of \$2.4 billion *below* trend. Recently, baseline revenue growth for FY 2003 was lowered to roughly 1 percent.

Finally, but perhaps not surprisingly, households are feeling less confident about the economy. According to MassInsight’s consumer confidence poll for Massachusetts, conducted every third month, consumer confidence plummeted in October to 78, down from 109 in April. Perhaps to a large extent, households were reflecting their feelings about the possibility of war with Iraq and falling stock market prices. It is also likely their responses were affected by the “real” economy, including job losses, slow income growth, uncertainty about future

income, and worries about debt payments. This could mean that declines in consumer spending are imminent. Wage income in the state, as estimated by the nominal withholding tax base, grew at a slow annualized rate of 1.1 percent in the third quarter, while consumer spending in Massachusetts, proxied by regular sales taxes, has been significantly weaker than consumer spending nationally.

There is a distinct possibility that both businesses and households, in assuming the recession would be short, have acted in a manner to buffer the effects of the recession by retaining workers and maintaining an accustomed standard of living. As the recession continues, both may feel the need to cut back on spending, which will prolong the recession into at least the beginning of next year. On the other hand, if spending by businesses for technology equipment or research and development begins to rise in the fourth quarter, the downturn may begin drawing to a close. 

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<sup>1</sup> Estimated from capital gains tax collections from FYs 1997–2001 to the amount they exceed \$300 billion. Also from the author’s estimates of withholding tax collections—derived from bonuses and stock options—to the amount they exceeded \$200 million in FYs 1997–2001. The methodology is available from the author on request.

<sup>2</sup> From the BEA’s National Income and Product Accounts.

<sup>3</sup> From Semiconductor Equipment and Materials International, an industry trade association.

<sup>4</sup> These data originate from the U.S. Department of Commerce and are processed and released by the Massachusetts Institute of Social and Economic Research.

<sup>5</sup> Board of Governors of the Federal Reserve System, monthly report on industrial production.

<sup>6</sup> The Census Bureau, monthly survey on manufacturers’ shipments, inventories, and orders.

<sup>7</sup> The Semiconductor Industry Association, monthly press release on worldwide semiconductor sales.

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ALAN CLAYTON-MATTHEWS is an assistant professor and the director of quantitative methods in the Public Policy Program at the University of Massachusetts Boston.